Device for Grinding Conical Clutches and Discs 117-58-5-10/24

but achieved a time saving equal to 235% as compared with the same work done by hand. There are 4 figures.

AVAILABLE: Library of Congress

Card 2/2 1. Lapping machines-Applications 2. Lapping machines-Operation

SHEVE, V. N. (Veterinarian, director)

"On zooveterinary servicing of consolidated kolkhoz." (contributor)

SO: Vet. 28 (10), 1951, p. 8

Brodokolmansk Central Zooveterinary District with the Rayon Veterinary Hospital Cheliabinsk Oblast'.

SHATAGIN, A. S., Eng., ALEKSANDROV, I. S., Eng.

Building Materials

Manufacture of construction slabs from waste products of natural rubber (slimes).
Biul. stroi. tekh 9 No. 16, 1952.

Monthly List of Russian Accessions, Library of Congress
November, 1952. UNCLASSIFIED

SHATAGIN, N.N.

Pumpellyite from Bakhchisaray District in the Crimea. Vest. Mosk. un. Ser. 4: Geol. 19 no.4:68-72 Jl-Ag '64.

(MIRA 17:11)

1. Kafedra poleznykh iskopayemykh Moskovskogo universiteta.

S/193/61/000/010/002/008
A004/A101

AUTHORS Sladkoshteyev, V.T., Candidate of Technical Sciences, Kuri'skiy, M A., Shatagin, O.A.

TITLE Continuous bronze casting on the horizontal УНИИМ (UNIIM) machine

PERIODICAL Byulleten' tekhniko-ekonomicheskoy informatsii, no. 10, 1961, 11-12

TEXT Since the methods of producing blanks from bronze and brass, cast in chills and on vacuum suction installations yield an insufficient output of serviceable castings (75-80%) and are of low efficiency, the Ukrainskiy institut metallov (Ukrainian Institute of Metals) in cooperation with the Khar'kovskiy zavod tsvetnykh metallov (Khar'kov Non-Ferrous Metal Plant) has developed an entirely new technology and designed the horizontal UNIIM machine for the continuous casting of bronze, yielding an output of serviceable blanks of 98-99%. The new technological process is characterized by the following: a graphite crystallizer heated on one end and cooled on the other is connected to the metal container and to the chamber of secondary cooling, this assembly being set into reciprocating motions by a special mechanism. The reciprocating motion prevents the blanks being cast from disrupting. To cool the blanks being cast down to 120-150°C the water flow

Card 1/2

Continuous bronze casting

in the channels should not be less than 1.25 m/sec. The best material for the contact walls of the crystallizer, having a length of 180 mm, is soft electric graphite. The water consumption of the crystallizer cooling section is 2 - 3 liter/min. On the pilot horizontal UNIIM casting machine round cast blanks 55 mm in diameter and up to 3.3 m long are produced from Бр ОЦС -555 (Br OTsS-555) bronze. Surface, macrostructure, chemical nonhomogeneity and mechanical properties of the bronze blanks meet the requirements of ГОСТ (GOST) 613-50. The semi-industrial horizontal casting machine under construction at the Khar'kovskiy zavod alyuminiyevykh i bronzovykh splavov (Khar'kov Aluminum and Bronze Alloy Plant) will produce blanks 25 - 150 mm in diameter from Br OTsS-555 and Br OTsS-663 bronze. Depending on the blank diameter, the machine has a capacity of 1.24-4.6, 4.6-18.6 and up to 41.8 tons/day producing blanks of 25 - 50, 50 - 100 and 100 - 150 mm in diameter respectively. The machine overall dimensions (length x width x height) are 9.5 x 1.2 x 1.3 m; it weighs 11.2 tons. There is 1 figure

S/136/62/000/003/005/008
E021/E435

AUTHORS: Sladkoshteyev, V.T., Kuritskiy, M.A., Shatagin, O.A., Vartazarov, M.A.

TITLE: Continuous casting of bronze on the horizontal УНИИМ (UNIIM) machine

PERIODICAL: Tsvetnyye metally, no.3, 1962, 67-74

TEXT: Production of bronze and brass billets by casting in a mould by normal means has the disadvantages of low production rates and inability to produce billets less than 60 mm in diameter or more than 1000 mm in length. Vertical continuous casting seemed unfavourable for bronze and brass with small cross sectional areas and therefore experiments were carried out on a horizontal continuous casting machine developed by the Ukrainskiy institut metallov (Ukrainian Metals Institute) and the Khar'kovskiy zavod alyuminevykh i bronzovykh splavov (Khar'kov Aluminium and Bronze Alloys Works). The method used is based on a graphite crystallization mould, induction heated at one end and cooled at the other, connected with a metal-reservoir and a chamber for secondary cooling. The whole is capable of reciprocating motion.

Card 1/2

Continuous casting of bronze ...

Liquid metal is fed from the metal-reservoir through the heated part of the crystallization mould into the cooled part where solidification of the metal takes place with continuous extraction of the billet by a pulling device. The main technical parameters for continuous casting of tin bronze in a round billet were worked out. The quality of the metal completely complies with specifications. A semi-industrial horizontal machine for casting round billets of 25 to 100 mm diameter has been constructed in the Khar'kov Aluminium and Bronze Alloys Works. This enables an increase in annual production of up to 98% and completely mechanizes production. Continuous casting of brass, copper and other non-ferrous metals can be carried out on a horizontal machine. There are 5 figures and 2 tables.

Card 2/2

SHATKIN, Ye.I.; SLAVKOSHTEYEV, V.T., kand. tekhn. nauk

Steel crystallization on horizontal continuous casting equipment. Sbor. trud. UNIIM no.9:153-159 '64 (MIRA 18:1)

L 8650-65 EWT(m)/EWP(b) MJW/JD

ACCESSION NR: AP4045653 S/0133/64/000/009/0795/0797

AUTHOR: Sladkoshteyev, V. T.; Shatagin, O. A.; Kuritskiy, M. A.; Yakunin, I. A.; Yeremenko, A. S.

TITLE: Technology of horizontal continuous casting of steel

SOURCE: Stal', no. 9, 1964, 795-797

TOPIC TAGS: horizontal continuous steel casting, continuous steel casting, continuous stainless steel casting, heat resistant steel casting, heat resistant alloy casting, cast consumable electrode

ABSTRACT: A horizontal continuous casting unit has been in operation in the pilot plant of the Ukrainian Scientific Research Institute of Metals. Molten metal is poured into a receiver from which it flows through a refractory conduit into a horizontal mold 500—700 mm long which moves forwards and backwards with the receiver and conduit. Seventy-three heats of structural carbon steel (15—35), structural alloy steel (20KhNA, 20Kh2N4), stainless steel (1Kh18N9 and 1Kh18N9T), ball-bearing steel (ShKh15), heat-resistant steel (E1787) and heat-resistant alloy (E1437B) melted in an arc furnace were cast into round

Card 1/2

L 8650-65

ACCESSION NR: AP4045653 /

ingots 80—90 and 120 mm in diameter. The ingot surface was found to be clean and free of slag inclusions, films, and scabs, but numerous seams were formed with each stroke of the mold. Therefore, the method cannot be recommended for casting ingots which have to be rolled. However, the ingots can be successfully used as consumable electrodes for electroslag and vacuum-arc melting. The 1Kh18N9T and 8hKh15 steel ingots can be used without any conditioning; the E1437B ingots need sand blasting. Orig. art. has: 3 figures.

ASSOCIATION: Ukrainskiy n.-i. institut metallov (Ukrainian Scientific Research Institute of Metals)

SUBMITTED: 00 ENCL: 00

SUB CODE: MM NO REF SOV: 000 OTHER: 000

Card 2/2

SHATAGIN, O.A.

Certain characteristics of the crystallization of steel during horizontal continuous casting. Izv. vys. ucheb. zav.; chern. met. 7 no.2:58-63 '64. (MIRA 17:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov.

SHATAGIN, O. [Shatahin, O.]; SUKMANSKAYA, N. [Sukmans'ka, N.], zhurnalist; MURZOV, K., inzh.

Uninterrupted teeming of steel. Nauka i zhyttia 12 no.9: 14-15 S '62. (MIRA 16:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov, Khar'kov (for Shatagin). 2. Donetskiy metallurgicheskiy zavod (for Murzov). (Steel—Metallurgy)

SLADKOSHTEYEV, V.T., kand.tekhn.nauk; SHATAGIN, O.A., inzh.; KURITSKIY, M.A., inzh.

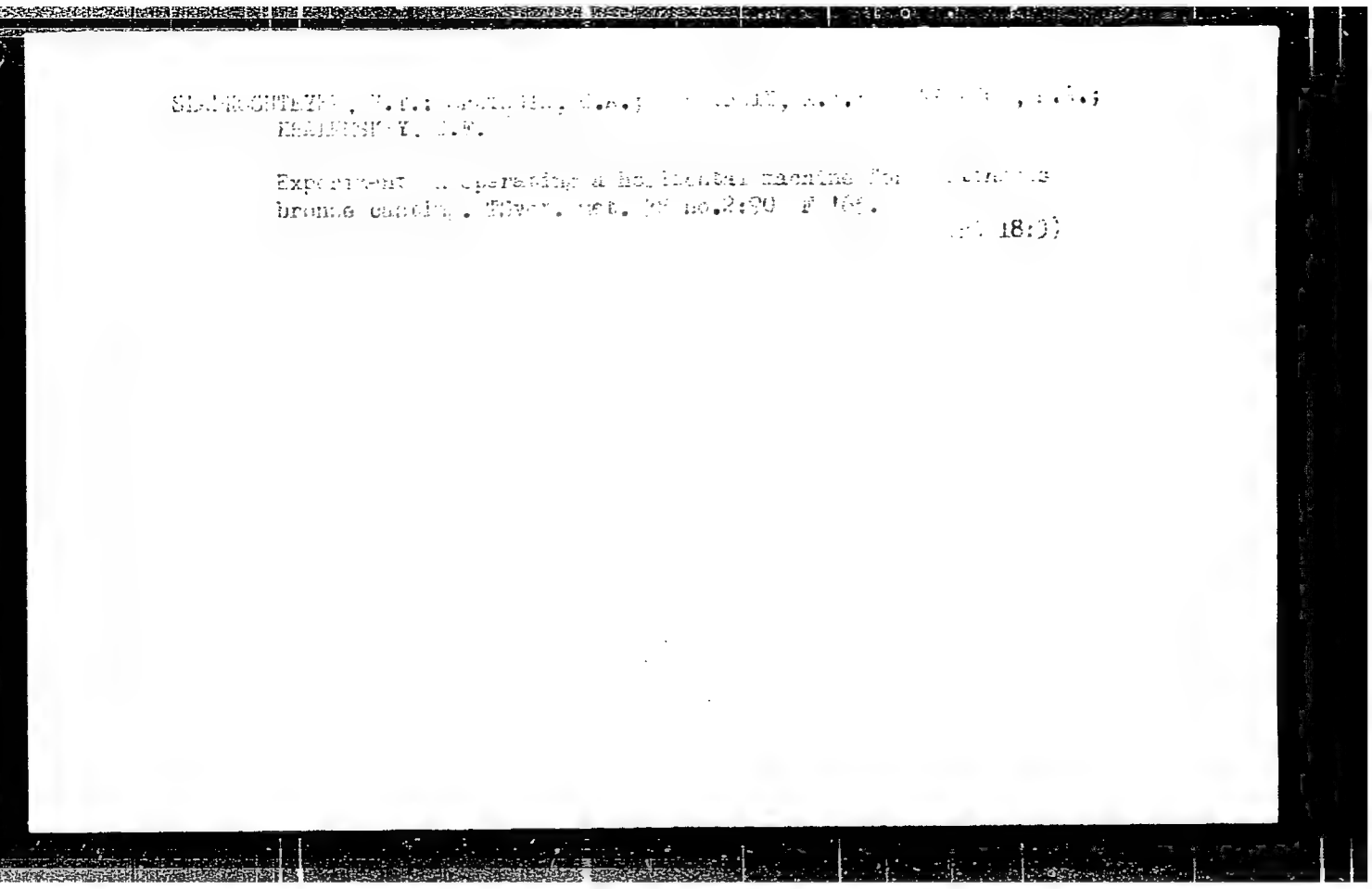
Horizontal continuous steel casting for electric slag refining. Met.i gornorud.prom. no.5:20-23 S-O '62. (MIRA 16:1)

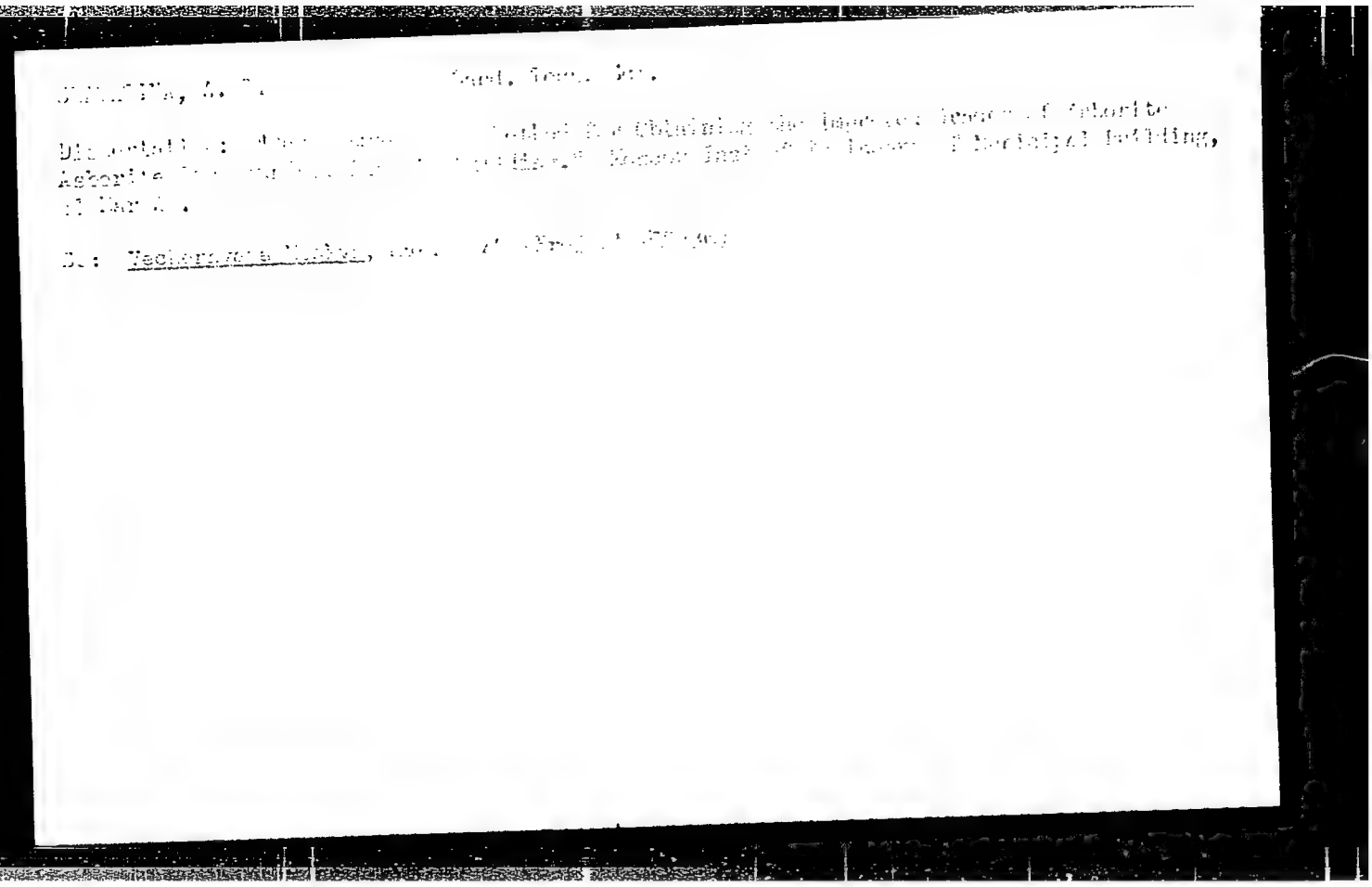
1. Ukrainskiy institut metallov.
(Continuous casting) (Zone melting)

SLADKOSHTEYEV, V.T., kand. tekhn. nauk; VARTAZAROV, M.A., inzh.; KRUTITSKIY, M.A., inzh.; SHATAGIN, O.A., inzh.

Horizontal continuous casting of nonferrous metals. Met. i gornorud. prom. no.1:47-50 Ja-F '62. (MIRA 16:6)

1. Ukrainskiy nauchno-issledovatel'skiy institut metallov (for Sladkoshteyev). 2. Khar'kovskiy zavod alyuminiyevykh i bronzovykh splavov (for Vartazarov, Krutitskiy, Shatagin).
(Nonferrous ingots)
(Continuous casting)





SHATAGINA, A. G.

PA 243T36

USSR/Engineering - Construction, Materials 31 Aug 52

"Fabrication of Wallboards From Waste of Natural Rubber (Slimes)," Cand Tech Sci A. G. Shatagina, Engr T. S. Aleksandrova, ROSNIIMS

"Byul Stroit Tekh" No 16, p 26

Briefly describes technology of fabricating heat-insulation plates from slimes which represent fibrous portion of roots of rubber-bearing plants. Technology was developed at Laboratory of Heat Insulating Materials of ROSNIIMS. States that each natural rubber factory of standard productive capacity gives several thousand tons of fibrous material during each season of 6-7 months and utilization of slime of only single factory would permit annual production of 1.0-1.5 million sq m of insulating plates.

243T36

SHATSKAYA, A.S.

USSR

Sound insulating elastic lining from waste of the asbestos-slate industry. A. G. Shatagina, B. M. Shtofenmakher, and T. S. Lifentseva. *Sbornik Trudov ROSNIIMS* (Russian Sci. Research Machine-Building Inst.) 1953, No. 5, 179-91; *Referat. Zhur., Khim.*, 1954, No. 41029.—The best compn. was found to be asbesto-slate waste 60-50 and waste paper 40-50%. This is bonded with a mixt. of paraffin emulsion 8 and $Al_2(SO_4)_3$ 10%. The asbe-to-slate material was first mixed with water; to it was added the waste paper, and then water to a concn. of 4%. The whole was mixed for 8-10 min. and to the mass the bonding substances were added.

M. Hyseh

SHATAGINA, A.G.

NIKOL'SKIY, V.N., kandidat tekhnicheskikh nauk; SHATAGINA, A.G., kandidat tekhnicheskikh nauk; PUSHEV, M.S., inzhener.

Sound insulating sheets made of packing materials. Gor.khoz.Mosk. 29 no.1:23-24 J '55. (MLRA 8:3)
(Soundproofing)

SHATAKHYAN, M.P.

Verminous appendicitis. Izv. AN Arm. SSR. Biol. nauki 13 no.6:71-74 Je '60. (MIRA 13:8)

1. Gospital'naya khirurgicheskaya klinika Yerevanskogo meditsinskogo instituta.
(WORMS, INTESTINAL AND PARASITIC) (APPENDICITIS)

SHATAKHYAN, M.P.; BABAYAN, E.B.

Leukocytosis focus in acute appendicitis. Sov.med. 26 no.1:111-113 Ja '63. (MIRA 16:4)

1. Iz kafedry gospital'noy khirurgii (zav. - prof. I.Kh. Gevorkyan) Yerevanskogo meditsinskogo instituta.
(LEUCOCYTOSIS) . (APPENDICITIS)

SHATALIN, [illegible]

36870. [illegible], A.G. i SHATALIN, A.S. Nekctoryye biokhimicheskiye pokazateli krovi bol'nykh gipertonicheskoy bolezn'yu, lechennykh radonobymi vannami ili unipolyarno-otritsatel'noy ionizatsiyey. Trudy Uzbek. gos. nauch.-issled. in-ta kurortologii i fizioterapii im. Semashko, sb. 11, 1949, c. 263-69

SO: Letopis' Zhurnal'nykh Statey, Vol. 50, Moskva, 1949

SHATALIN, A.S.

Influence of Tashkent mineral water on micturition in healthy dogs.
Izv. AN Uz.SSR. Ser.med. no.6:28-34 '59. (MIRA 13:4)

1. Uzbekskiy gosudarstvennyy nauchno-issledovatel'skiy institut kurortologii i fizioterapii im. Semashko.
(TASHKENT--MINERAL WATERS--PHYSIOLOGICAL EFFECT)
(URINE--SECRETION)

ESTRIN, P.L.; SHATALIN, A.S.

Influence of Tashkent mineral water on the blood sugar content. Trudy Uz. gos. nauch.-issl. inst. kur. i fizioter. no.15:163-174 '59. (MIRA 14:9)

(BLOOD SUGAR) (MINERAL WATERS)

SHATALIN, A.S.

Influence of Tashkent mineral water on diuresis, excretion of chlorides and urea in healthy dogs. Trudy Uz. gos. nauch.-issl. inst. kur. i fizioter no.15:251-262 '59. (MIRA 14:9)
(DIURETICS AND DIURESIS)
(MINERAL WATERS)

SHATALIN, G.I.

Over-all mechanization and automation of lumbering in Kirov Economic Region. Mekh.i avtom.proizv. 14 no.1:28-32 Ja '60. (MIRA 13:5)

1. Sekretar' Kirovskogo obkoma Kommunisticheskoy partii Sovetskogo Soyuza.
(Kirov Province--Lumbering--Machinery)
(Automation)

DANOVSKIY, L.M., kand.tekhn.nauk; KOTYUKOV, I.A., kand.tekhn.nauk; KONDAKOV, N.P., kand.tekhn.nauk; SHATALIN, I.I., kand. tekhn.nauk; GROMOV, L.K., kand.tekhn.nauk; PECHUGIN, D.A., dots.; MIROSHIN, P.V., dots.; SHCHEPOTIN, K.I., assistent (Novosibirsk)

New textbook on tracks ("Tracks" by G.Al'brekht and others. Reviewed by L.M.Danovskii and others). Put' put.khoz. 4 no.4:45-47 Ap '60. (MIRA 13:7)

1. Sotrudniki kafedry "Put' i putevoye khozyaystvo" Nauchno-issledovatel'skogo instituta inzhenerov.
(Railroads--Track) (Al'brekht, G.) (Liders, G.V.) (Nikiforov, P.A.) (Chlenov, M.T.) (Chernyshev, M.A.)

SHATALIN, A.S.

Protein fractions in the blood and the permeability of the vascular wall in hypertension treated with hydroaeroionization. Trudy Uz.gos. nauch.-issl. inst.kur. i fizioter. 13:219-223 '55.
(MIRA 18:2)

SHATALIN, M., kand.istoricheskikh nauk

How to guide a group studying the themes "Early phase of the labor movement and the dissemination of Marxist ideas in Russia from 1883 to 1894" and "History of the CPSU in the carrying out of Marxist-Leninist ideas." Komm.Vooruzh.Sil 1 no.6:83-87 D '60. (MIRA 14:8)

(Socialism)
(Communist Party of the Soviet Union)

SHATALIN, M., kand.istoricheskikh nauk

How to conduct a seminar on the topic "CPSU in the period of the large scale building of communism." Komm.Vooruzh.Sil 2 no.6:61-66 Mr '62. (MIRA 15:3)
(Communist education)

SHATALIN, M.N., polkovnik, dotsent, kand.istoricheskikh nauk

Character of a nation-wide purpose of the Soviet Armed Forces.
Mor.sbor. 46 no.2:9-16 F '63. (MIRA 16:2)
(Russia—Armed forces)

[redacted], Yuriy Vladimirovich; SHATALIN, Stanislav Sergeyevich; TRIFSIK, G.B., red.; BAZLOVA, Ye.M., mlad. red.

[Branch structure of social production; on the analysis of the factors and structure of the correlation between subdivisions I and II] Otraslevaia struktura obshchestvennogo proizvodstva; k analizu faktorov i struktury sootnosheniia I i II podrazdelenii. Moskva, Ekonomika, 1965. 20 p. (MIRA 18:9)

FOKIN, O.V.; SHATALIN, V.A.

Measuring temperatures during metal cutting. Trudy SADI no.16 pt.1 83-94 '59. (MIRA 13:11)
(Metal cutting) (Thermometry)

RED'KO, S.G., kand.tekhn.nauk, dotsent; SHATALIN, V.A., aspirant

Effect of curvature on contact stresses. Izv.vys.ucheb.zav.; mashinostr. no.4:92-105 '62. (MIRA 15:7)

1. Saratovskiy politekhnicheskiy institut.
(Strains and stresses)

SHATALINA, A.S., professor, doktor bioligicheskikh nauk.

Change in the blood picture of karakul sheep due to care and climate. Biul. SAGU no.28:91-102 '49. (MLRA 9:5)
(Karakul sheep) (Blood)

SHATALINA, A.S.

Certain changes in physiological functions under mountain conditions.
Trudy SAGU no.59:26-69 '54. (MLRA 9:12)
(ALTITUDE, INFLUENCE OF) (BLOOD--ANALYSIS AND CONDITIONS)

SHATALINA, A.S.

Physiological examination of the participants in the group ascent of the Great Chimgan Peak. Trudy SAGU no.59:70-99 '54. (MLRA 9:12)
(CHIMGAN--MOUNTAINEERING) (CARDIOVASCULAR SYSTEM)
(ALTITUDE, INFLUENCE OF)

SHATALINA, A.S.; TER-AKOPYAN, M.A.

Effect of a ski march in the mountains on the organisms of the participants. Trudy SAGU no.59:100-109 '54. (MLRA 9:12)
(SKIS AND SKIING) CARDIOVASCULAR SYSTEM)

SHATALINA, A.S.

"Data on the water-salt regimen of mountain climbers."

Report submitted for th 13th Intl Congress of Sports Medicine
Moscow July-Aug 1961

SHATALIN, A.G.; KHRISTOFOROVA, E.A.

Change in the cardiovascular system as a result of muscular activity under hot climate conditions. Nauch. trudy Tashgu no.243. Biol. nauki no.74:113-127 '64.

(MIRA 18:7)

Shafiev, . A.

"Study of Certain Problems of Analytic Chemistry with the Aid of Radioactive Cesium Isotope." Gor'kiy State U, Chair of Analytic Chemistry, (Gor'kiy, 1955). (Dissertation for the Degree of Candidate of Chemical Sciences.)

SO: [illegible], Feb 56

AUTHORS: Korenman, I.M., Shatalina, G.A. 75-13-3-7/27

TITLE: Co-Precipitation of Cesium With/Dipicrylamines Difficult Hardly Soluble to Solve (Soosazhdeniye tseziya s malorastvorimymi dipikrilaminatami)

PERIODICAL: Zhurnal analiticheskoy khimii, 1958, Vol 13, Nr 3, pp 299-303 (USSR)

ABSTRACT: Dipicrylamine has for a long time been known as a sensitive reagent to potassium and is frequently used for the qualitative and quantitative determination of potassium, rubidium and cesium (references 1-6). In publications, however, there are no indications concerning the co-precipitation of cesium with the dipicrylamines of potassium, rubidium, thallium and ammonium difficult to solve. The authors investigated the possibility of such a co-precipitation and used the radioactive isotope Cs^{134} as an indicator. It became evident that cesium is practically quantitatively precipitated with the dipicrylaminates of potassium, rubidium and thallium.

At temperatures of 0 - 30°C the co-precipitation of cesium with potassium dipicrylaminate is practically complete.

Card 1/4

On a further rise in temperature the amount of co-precipitated cesium decreases due to the higher solubility of the precipitation, but the content of cesium in a certain amount of the main precipitation remains constant at different temperatures. From this follows that changes of temperature exert no influence upon the co-precipitation of cesium. Furthermore the adsorption of cesium in previously prepared precipitations of potassium and thallium dipicrylaminate was investigated. It became evident that the co-precipitation of cesium with these dipicrylaminates is not based on adsorption, but is of isomorphous nature. Further experiments showed that third components (e.g. Rb or Tl in the case of potassium dipicrylaminate) exert no influence upon the co-precipitation of cesium. The order of the addition of reagents does not exert any influence upon the amount of co-precipitated cesium either, which also speaks against a co-precipitation by adsorption. On an increase in the amount of the macrocomponent or a decrease in the amount of the micro-component the content of cesium decreases in 1 mg of the precipitation; the amount of co-precipitated cesium is

Hardly Soluble

Co-Precipitation of Cesium With/Dipicrylamines 75-13-3-7/27
Difficult to Solve

therefore independent of the absolute amount of the precipitation. Cesium is in all these cases practically quantitatively co-precipitated. All these results lead to the conclusion that the co-precipitation of cesium is of an isomorphous nature. On a decrease in the amount of the precipitant the amount of co-precipitated cesium decreases, but it increases in proportion to the decrease in the amount of main precipitation. The strongest effect of this type is shown by co-precipitation with ammonium dipicrylaminate, with rubidium dipicrylaminate this effect does almost not occur at all. The fact of the practically complete co-precipitation of cesium with precipitations of dipicrylaminates permitted the elaboration of an accumulation method for cesium which is described. Based on the investigations it was found that dipicrylaminates difficult to solve and especially ammonium salt can be used as carriers of the separation of cesium traces from very diluted solutions. There are 2 figures, 7 tables, and 6 references, 4 of which are Soviet.

Card 3/4

Hardly Soluble

Co-Precipitation of Cesium With/Dipicrylamines Difficult to Solve

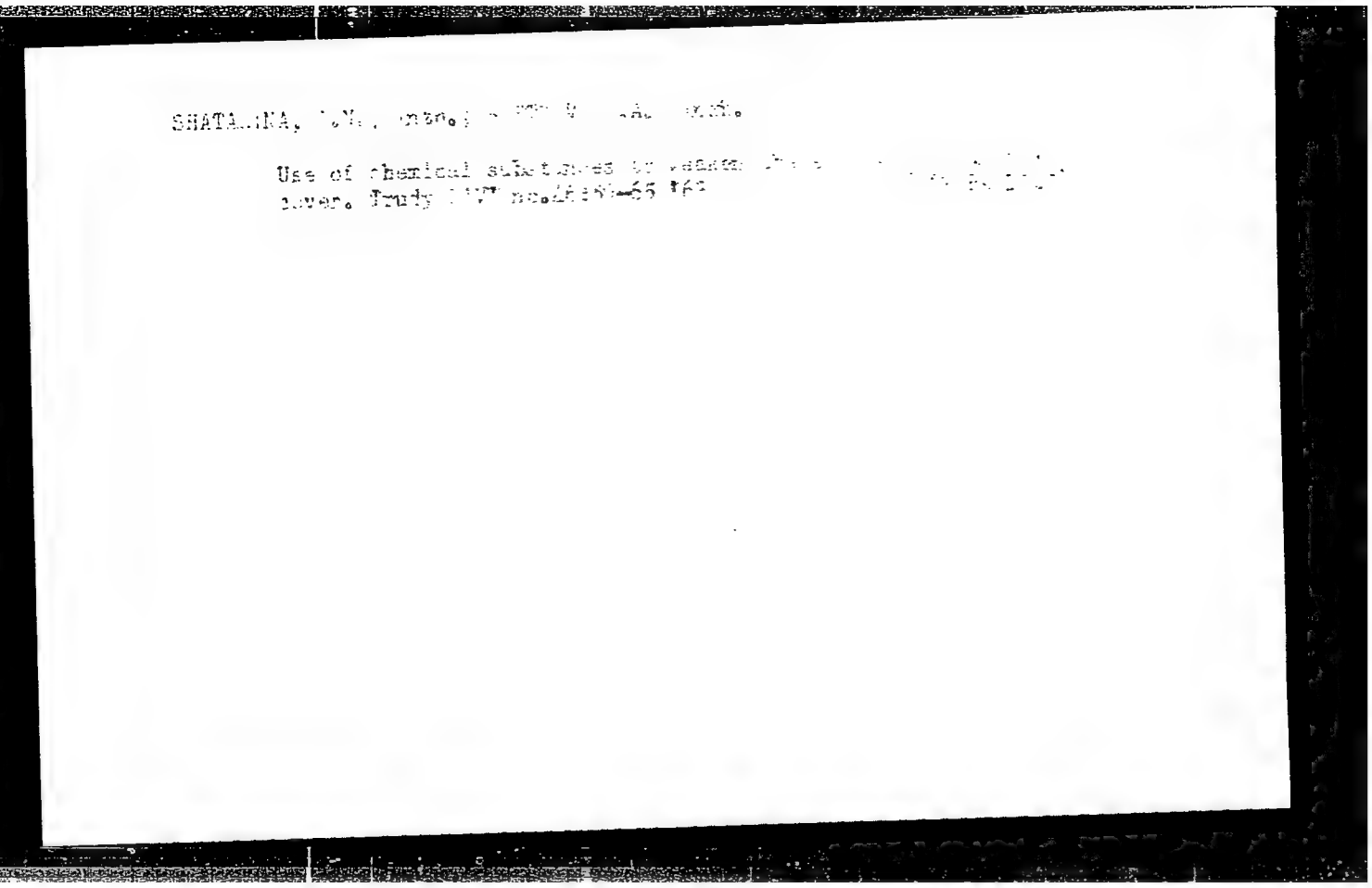
75-13-3-7/27

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet im. N.I. Lobachevskogo (Gor'kiy State University imeni N.I. Lobachevskiy)

SUBMITTED: May 11, 1956

1. Cesium---Precipitation

Card 4/4



SHATALINA, [illegible]

Use of chemical substances in [illegible]
[illegible]. Trudy [illegible] no.[illegible]-65 [illegible]

DUBROV, Mark Izraylevich, zhurnalist; SHATALINA,M.A., red.; POL'SKAYA, R.G., tekhn.red.

[First shock workers' brigade] Pervaia udarnaia. Leningrad, Lenizdat, 1960. 96 p. (MIRA 14:5)

(Leningrad--Textile workers)

KRYUCHKOV, Fedor Ivanovich; SMIRNOV, Pavel Alekseyevich; SHATALINA, M.A., red.; PRESNOVA, V.A., tekhn. red.

[Division commander Solodukhin] Nachdiv Solodukhin. Leningrad, Lenizdat, 1961. 219 p. (MIRA 14:12)
(Russia--Revolution, 1917-1921)
(Solodukhin, Petr Adrianovich, d.1920)

SHAPKINA, M.S.

Primary stages of the development of [illegible] in [illegible]
(Rhododendron caucasicum Pall.). Bot. zhur. 49 no.5:690-696
My '64. (MIRA 17:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

SHATALINA, M.S.

Characteristics of the distribution of rhododendrons in the Teberda Preserve. Nauch. dokl. vys. shkoly; biol. nauki no.4:116-121 '63. (MIRA 16:11)

1. Rekomendovana kafedroy geobotaniki Moskovskogo gosudarstvennogo universiteta im. Lomonosova.

SHATALINA, M.S.

Morphology of seeds of the Caucasian species of rhododendron.
Vest. Mosk. un. Ser. 6: Biol., pochv. 18 no.1:41-44 Ja-F '63.
(MIRA 16:12)

1. Kafedra geobotaniki Moskovskogo universiteta.

SHATALINA, M.S.

Distribution of some species of rhododendrons in the Caucasus.
Biul. MOIP. Otd. biol. 69 no.1:135-139 Ja-F '64. (MIRA 17:4)

SHATALINA, Ol'ga Aleksandrovna

Comparative (otsenka) of Some Methods of Exposure of Injured (dremlyushchey) Infection

Dissertation for candidate of a Medical Science degree, Saratov "N.I.I. VOSKHITO," 1952

[redacted], V.F., starshiy nauchnyy sotrudnik; CHERFAS, M.B., starshiy [redacted]nyy sotrudnik

Fractures of the spine in tetanus. Ortop., travm. i protez. (MIRA 18:12)
26 no.4:58-59 Ap '65.

1. Iz Saratovskogo instituta travmatologii i ortopedii (dir. - dotsent Ya.N.Rodin). Adres avtora: Saratov, ulitsa Chernyshevskogo dom 148, Institut travmatologii i ortopedii.

SVES[redacted], I.A.; SHATALINA, V.D.

Raising the performance efficiency of electrolyzers. Masl.-zhir. prom. 27 no.12:33-36 D '61. (MIRA 14:12)

1. Predpriyatiye "Energotekhnaladka".
(Electrolysis)
(Oil industries—Equipment and supplies)

SHATALOV, A., general-mayor inzhenerno-tekhnicheskoy sluzhby, prof., doktor tekhnicheskikh nauk

Automatic control of rocket weapons. Tekh. i vooruzh. no.1:12-16 Ja '64. (MIRA 17:6)

SHATALOV, A., agronom; SOLOTKOV, V., inzhener-mekhanik

Ammonia as fertilizer. Zemledelie 27 no.6:72 Je '65. (MIRA 18:9)

1. Sovkhoz "Bor'ba", Ygor'yevskogo rayona, Moskovskoy oblasti (for Shatalov).

SHATALOV, A.A.

Photochemical transformation of *F*-centers in potassium chloride crystals at high temperatures. A. A. Shatalov (T. G. Shevchenko State Univ., Kiev). *Doklady Akad. Nauk S.S.S.R.* 92, 549–52(1953)(Engl. translation issued as *U.S. Atomic Energy Comm.* NSF-tr-198(1954)).—A study was made of the variation in the optical absorption of KCl crystals contg. *F*-centers under the action of light at high temps. The crystal was colored by the introduction of electrons into the heated crystal from a Na electrode. *F*-band light was focused sharply on the surface of the crystal. *F*-centers produced in crystals of 500° were not destroyed by light at temps. down to 300°; however, between 300 and 270°, extensive destruction occurred with the *F*-band being replaced by a bell-shaped absorption band with max. at 740–750 mμ. This new "*X*-band" differed little from the original *F*-band. The *X*-band was unstable at the temp. of formation, but became stable both in darkness and in white light upon being quenched rapidly to room temp. Light at 250, 200, and 150° crystal temps. completely destroyed the *F*-band. The rate of destruction attained a max. and then dropped sharply with decrease in temp. After the illumination was turned off, the newly formed centers were destroyed at a rate decreasing with temp. until full thermal stability was attained at 200°. The coloration found after illumination at these temps. differed from the color of the *X*-centers, being characterized by a broad, less-intense band at a longer wave length. It was concluded that at *X*-band temps., the optical destruction of *F*-centers (a function of temp., initial *F*-center concn., and intensity of the *F*-light) and thermal conversion of the new centers to *F*-centers (a function only of temp. at fixed initial concn.) occurred simultaneously. It was found that with increasing *F*-light intensity at const. temp., the satn. concn. of *X*-centers increased. The *X*-band was attained at 350° by doubling incident light intensity. *X*-centers were not produced with *F*-center concn. of 10^{17}/cc., but at higher concns., special heat-treatment produced bands similar to the optical *X*-band in thermal equil. with the diminished *F*-centers. It was indicated that these phenomena were related to colloidal coagulation of *F*-centers. It was concluded that *X*-centers are the simplest initial formations in the process of colloidal coagulation, either new single-atomic centers or the product of amalgamation of two *F*-centers. Arguments in support of the assignment of the *X*-band to F_2 centers are presented.

Harry Letaw, Jr.

USSR/Optics - Physical Optics, K-5

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 35720

Author: Shatalov, A. A.

Institution: None

Title: Measurement of Absorption Spectra of Dyed Alkali-Haloid Crystals at High Temperatures and New Data on the Conversion of the Dye Centers

Original Periodical: Nauk. zap. Kiivs'k. un-t., 1955, 14, No 8, 47-63

Abstract: When crystals of KCl, dyed by electrolysis at 500°, were illuminated by light from the F-band at 270-290°, this band was completely destroyed and a new symmetrical bell-shaped X-band was formed, quite similar in half-width and height to the F-band, but shifted by 0.5 ev toward the longer waves. The X-band is thermally unstable and after the illumination is stopped it is rapidly converted to the initial F-band. It can be "frozen" by rapid cooling and at 20° it is fully stable. At 250-100° the light also fully damages the

Card 1/2

SHATALOV, A. A.

K-5

Category : USSR/Optics - Physical Optics

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 2321

Author : Shatalov, A A
Inst : Kiev State University, USSR
Title : On the Photochemical Transformation of Coloring Centers in Heated Potassium-Chloride Crystals

Orig Pub : Zh. eksperim i teor. fiziki, 1955, 29, No 6, 847-856

Abstract : When monocrystals of KCl, colored by electrolysis at 500° are illuminated by light from an F-band at 270-300°, the F band becomes destroyed and an X band is formed quite similar in shape to the F band at approximately 740 mμ. If the illumination is stopped at 270-300° the X band is soon destroyed and the F band is restored. The X band can be "frozen", and at room temperature it is optically and thermally stable. It is deduced that when colored crystals are illuminated at high temperature, an optical destruction of the F centers (F→X) and a thermal destruction of the X centers (X→F) occur simultaneously. The rate of growth of the X band is determined by the speeds of the two processes; it is quite slow at 20-100°, after which it rises sharply, reaching a maximum at approximately 240°, and then diminishes sharply again. Light at 150-250° also discolors the F band completely, but the bands produced in that case differ from the X band, for as the temperature is reduced, they continue to drop

Card : 1/2

Category : USSR/Optics - Crystal Optics

Abs Jour : Ref Zhur - Fizika, No 1 1957 No 2321

.-5

at an ever increasing rate, broaden, and shift toward the longer waves. The F band is only partly discolored below 150°. Data on the formation of colloidal metal particles in alkali-halide crystals lead to the conclusion that the X centers are F_2 centers formed by rapid merging of the thermally-unstable F' centers with the halide vacancies $Cl_{\square}$, in accordance with the scheme $F + F \xrightarrow{h\nu} Cl_{\square} + F' \longrightarrow F_2$. A sufficient ion mobility, i.e. a sufficiently high temperature, is required for such a process.

Card : 2/2

NIZOVKINA, D.V.; SHATALOV, A.A.

Colloidal coagulation of F centers in NaCl crystals. Nauk povid. no.1:12-13 '56. (MIRA 11:4)
(Sodium chloride) (Crystal lattices)

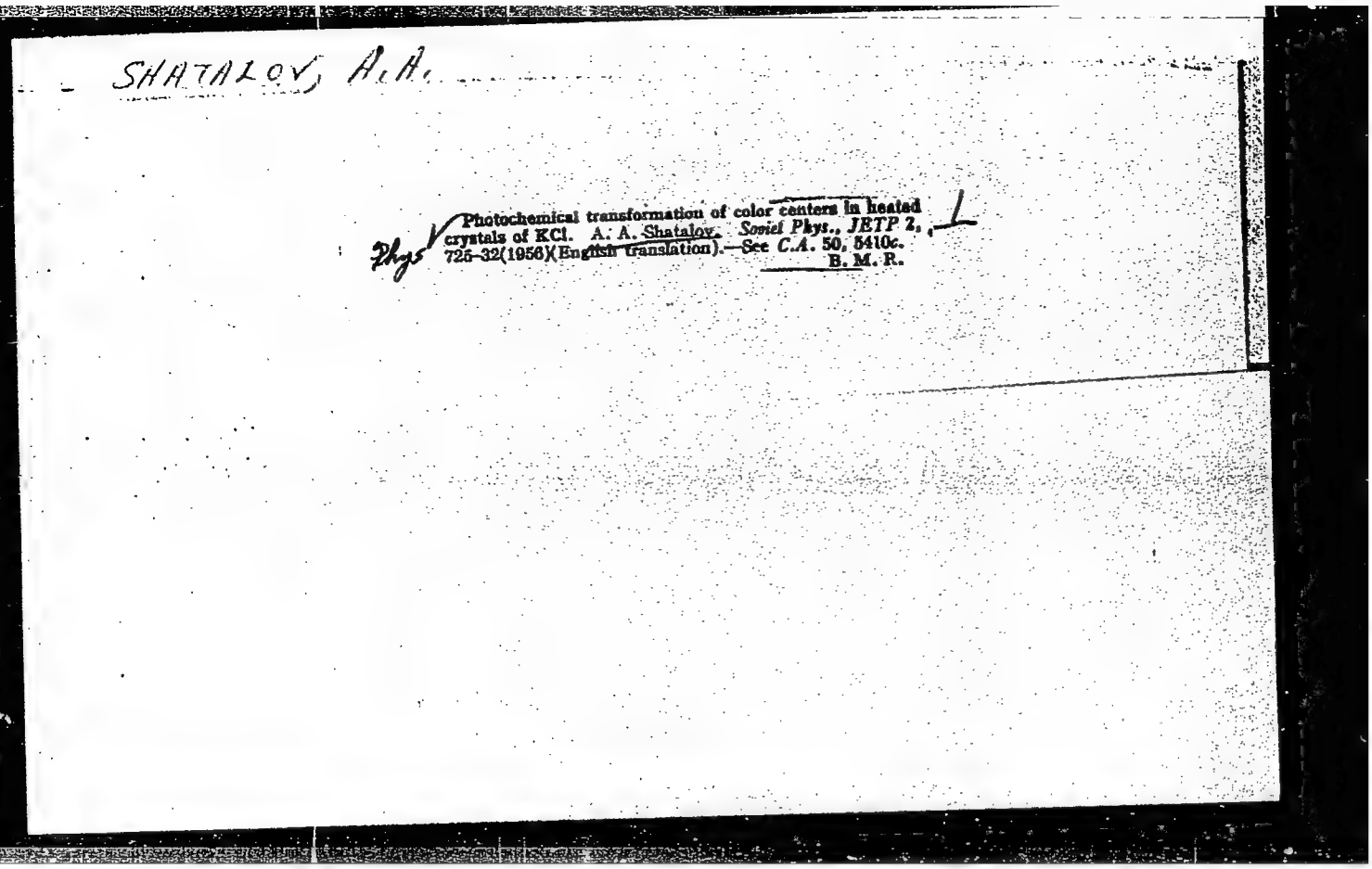
SHATALOV, A.A.

Kinetics of photochemical conversion of F centers in crystals at 270-300°C. Nauk povid. KDU no.1:13-15 '56. (MIRA 11:4)
(Photochemistry) (Potassium chloride)
(Crystals-optical properties)

SHATALOV, A.A.

Relation between the diffusion coefficient and the mobility of F centers in alkali metal halide crystals. Nauk povid. KDU no.1:15-17 '56. (MIRA 11:4)

(Alkali halide crystals)



SHATALOV, A. A.

Phys

Photochemical transformation of color centers in heated crystals of KCl. A. A. Shatalov. *Soviet Phys., JETP* 2, 725–32(1956)(English translation).—See *C.A.* 50, 5410c.
B. M. R.

SHATALOV, A.A.

Quantum yield in the photochemical conversion of F centers in heated potassium chloride crystals. Izv. AN SSSR Ser.fiz. 20 no.4:488-492 Ap '56. (MLRA 10:1)

1. Kiyevskiy gosudarstvennyy universitet imeni T.G. Shevchenko.
(Luminescence) (Fluorescence)

PRIKHOT'KO, A F

24(7) p 3 PHASE I BOOK EXPLOITATION SOV/1365

L'vov. Universytet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii. t. 1: Molekulyarnaya spektroskopiya (Papers of the 10th All-Union Conference on Spectroscopy. Vol. 1: Molecular Spectroscopy) [L'vov] Izd-vo L'vovskogo univ-ta, 1957. 499 p. 4,000 copies printed. (Series: Its: Fizychnyy zbirnyk, vyp. 3/8/)

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po spektroskopii. Ed.: Lazer, S.L.; Tech. Ed.: Saranyuk, T.V.; Editorial Board: Landsberg, G.S., Academician (Resp. Ed., Deceased), Neporent, B.S., Doctor of Physical and Mathematical Sciences, Fabelinskiy, I.L., Doctor of Physical and Mathematical Sciences, Fabrikant, V.A., Doctor of Physical and Mathematical Sciences, Kornitskiy, V.G., Candidate of Technical Sciences, Rayskiy, S.M., Candidate of Physical and Mathematical Sciences, Klimovskiy, L.K., Candidate of Physical and Mathematical Sciences, Miliyanchuk, V.S., Candidate of Physical and Mathematical Sciences, and Glauberman, A. Ye., Candidate of Physical and Mathematical Sciences.

Card 1/30

Card 11/30

SHATALOV, A.A.

Spectrum analysis of the coloidal coagulation of F-centers in alkali halide crystals. Fiz. sbor. no.3:148-151 '57. (MIRA 11:8)

1. Kiyevskiy gosudarstvennyy universitet im. T.G. Shevchenko i Institut kristallografii AN SSSR.
(Alkali halide crystals—Spectra)

SHATALOV, A.A.

51-6-9/25

AUTHOR: Shatalov, A. A.

TITLE: On the Photochemical Transformation of Colour Centres in Heated Alkali-Halide Crystals. (O fotokhimicheskom prevrashchenii tsentrov okraski v nagretykh shchelochno-galoidnykh kristallakh.)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol. III, Nr. 6, pp. 610-618. (USSR)

ABSTRACT: This paper reports further results of the study of colour centres formed by the action of light on F-centres in heated alkali-halide crystals (see also Refs.1-3). The author studied the kinetics of the reversible photochemical process in crystals of KCl at 270-300°C. Fig. 1 shows the change with time of the optical density of KCl, measured at 280°C, in the process of photochemical decomposition and thermal re-formation of F-centres (continuous curves 1 and 2) and simultaneous chemical formation and thermal destruction of X-centres (continuous curves 3 and 4). The results of Fig.1 are given in logarithm form in Fig.2. The author also studied the temperature dependence of the rate of photochemical transformation

Card 1/4

On the Photochemical Transformation of Colour Centres in Heated Alkali-Halide Crystals.

according to the equation $2F \rightleftarrows F_2$) time dependences of concentrations of colour centres agree satisfactorily with one another. (2) The temperature dependence of photochemical transformation of F-centres requires ionic mobility for this transformation. Therefore this transformation does not affect only the internal structure of separate centres, but under the action of light colloidal coagulation of F-centres occurs.
(3) X-centres produced thermally in NaCl possess photochemical sensitivity and are transformed by the action of monochromatic light irradiation in the X-maximum into F-centres. This transformation is, in essence, the reverse of that observed in KCl crystals.
(4) The spectral position of X-band maxima in different alkali-halide crystals satisfies the equation $\nu_{max} d^2 = \text{const}$, where ν_{max} is the maximum frequency of the X-bands, and d is the lattice constant. This indicates that the X-centres possess identical structure in different crystals, and that they are related to the properties of the lattice. There are 6 figures,

SUBJECT: USSR/Luminescence

48-4-37/48

AUTHOR: Shatalov A.A.

TITLE: Photochemical Transformations of Color Centers in Heated Alkali-Haloid Crystals (Fotokhimicheskiye prevrashcheniya tsentrov okraski v nagretykh kristallakh)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #4, pp 587-588 (USSR)

ABSTRACT: The time-dependence of the optical density of F-centers in the process of their reversible photochemical destruction and thermal restoration was measured in KCl crystals at temperatures from 270 to 300°C. At the same time, conjugated curves relating to the arising of the X-band under light action and its thermal destruction in darkness were measured. Kinetic equations were solved and time-dependences of concentrations of F- and X-centers were found, which agreed well with experimental curves.

Time isotherms of the optical density of F-centers in KCl were also measured for irreversible photochemical transformations. The temperature-dependence of the rate of the

Card 1/3

TITLE: Photochemical Transformations of Color Centers in Heated Alkali-Haloid Crystals (Fotokhimicheskiye prevrashcheniya tsentrov okraski v nagretykh kristallakh) 48-4-37/48

The bibliography lists 3 references, of which 2 are Slavic (Russian).

The report was followed by a short discussion.

INSTITUTION: Kiyev State University im. Shevchenko; Institute of Crystallography of the USSR Academy of Sciences.

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 3/3

tempering of five hours. In consequence of photo-chemical influence on F-centres in heated alkali-halogen crystals, new colour centres will form. As has been proved previously (Refs 1,2 and 7), these represent initial formations from which the production of colloids starts. Furthermore results of new research work are referred to which can be summarized as follows: the transition of F-centres to colloids does not take place rapidly in the lattice of alkali-halogen salts as may be concluded from the papers by Scott (Skott) and cooperators (Refs 5 and 6), but rather via intermediate centres which form within the main lattice of the crystals. The smallest products of the thermal colloidal coagulation consist of aggregates of F-centres. Owing to their smallness, they represent "limit"- formations which are defined as F_2-centres on this occasion. They are produced in "pure form" only by photochemical procedure. There are 4 figures and 11 references, 9 of which are Soviet.

Properties and Structure of the Initial Amalgamations of the F-Centres During the Process of Their Colloidal Coagulation

SOV/48-22-11-10/35

ASSOCIATION: Kiyevskiy gos. universitet im. T. G. Shevchenko
(Kiyev State University imeni T. G. Shevchenko)
Institut kristallografii Akademii nauk SSSR
(Institute of Crystallography of the Academy of Sciences, USSR)

Card 3/3

SHAFRANOV, V. A., Doc of Phys-Math Sci -- (diss) "Properties and Conversions of Atomic, Molecular, and Colloidal Centers in Colors of Heated Alkalo-haloidal Crystals," Kiev, 1959, 25 pp (Belorussian State Univ; Kiev State Univ; Institute of Crystallography, Acad Sci USSR)

(KL, 2-60, 110)

S/048/61/025/003/014/047
B104/B214

24.7500 (1136, 1143, 1160)

AUTHORS: Bezruchko, V. M. and Shatalov, A. A.

TITLE: Visualization of defects in the lattice of alkali halide crystals with the help of electrolytic coloring

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 3, 1961, 349-350

TEXT: This paper was read at the Ninth Conference on Luminescence (Crystal Phosphors) held in Kiyev from June 20 to June 25, 1960. In the introduction, it is shown that the effect of different kinds of lattice defects on the formation of color centers has been mostly not taken into consideration. It is shown that different kinds of lattice defects are revealed by electrolytic coloring. Since the energies of thermal activation of the ions and of the formation of vacancies at the defects are considerably smaller, the color centers develop there much faster. It is thus possible to observe the defects made visible in a transparent solid body. Defects of various structures were discovered in this manner in the laboratory of the authors. In this connection, it was found that on a

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B104/B214

Visualization of defects...

certain heat treatment of alkali halide crystals certain deformations appear, which are in the form of domains and are very similar to those of ferroelectrics. If the crystal is heated to above 500°C and then suddenly cooled to room temperature, the specimen is divided somehow into thin layers parallel to the (110) and (1$\bar{1}$0) planes. The thickness of these layers lies between 0.2 and 0.4 mm. On examination with a polarization microscope in the direction {100}, these were detected in the form of dark and bright bands causing a periodic change in the refraction of light. By coloring, these layers acquire a red or blue color in ordinary light, which shows the existence of color centers of different sizes. It can also be concluded from this fact that in the neighboring twin domains, the lattice is in different states. The coexistence of two lattice modifications having also different coalescence rates of the F-centers leads to the formation of red (odd) and blue (even) centers. The crystals so treated show also a birefringence and a dichroism. Special experiments on NaCl showed that the rate of coagulation depends largely on the static deformations. At the same time, this supports the assumption that the above-mentioned development of layers is a deformation of the crystal domains. There is 1 figure.

Card 2/3

Visualization of defects...

20826
S/048/61/025/003/014/047
B104/B214

ASSOCIATION: Kiyevskiy gos. universitet im. T. G. Shevchenko
(Kiyev State University imeni T. G. Shevchenko)

X

Card 3/3

S/058/62/000/006/124/136
A062/A101

AUTHORS: Deryugin, I. A., Kachkivs'ka, Ye. T., Shatalov, A. A.

TITLE: Electron microscope investigation of sodium colloids in NaCl crystals

PERIODICAL: Referativnyy zhurnal, Fizika, no. 6, 1962, 52, abstract 6Zh339 ("Visnyk Kyyivs'k un-ty", 1958, no. 1, ser. fiz. ta khimiyi, no. 1, 3-7, Ukrainian; Russian summary)

TEXT: Etched surfaces of a split of dyed NaCl crystals were investigated by the method of Cr-tinted varnished replicas. An evaluation was made of the average statistical size of blue color colloids whose diameter varies in the 40 - 125 mμ range with a maximum in the region of 70 - 80 mμ. The size and the concentration of Na colloids permit the conclusion that, from a certain moment the growth of colloids begins to take place on account of the points of the fundamental crystal lattice, in a manner analogous to the growth that takes place in illuminated silver haloid crystals.

[Abstracter's note: Complete translation]

Card 1/1

L 16872-63

ACCESSION NR: AR3006302 O

into individual twin regions which are differently polarized. The mechanism of the re-orientation of F_2 centers during the process of action of polarized light is discussed. It is also found that colloidal centers can acquire an anisotropic form and orientation in the case of photochemical destruction and under the action of pressure. T. Eksina.

DATA ACQ: 15Aug63 SUB CODE: PH ENCL: 00

Card 2/2

0

ACCESSION NR: AT4016327 S/0000/62/000/000/0432/0436

AUTHOR: Bugay, A. A.; Ruban, M. A.; Shatalov, A. A.

TITLE: Electron paramagnetic resonance of some color centers in alkali halide crystals

SOURCE: Vses. soveshch. po fiz. shchelochnogaloidn. kristallov. 2d, Riga, 1961. Trudy*. Fiz. shchelochnogaloidn, kristallov (Physics of alkali halide crystals). Riga, 1962, 432-436

TOPIC TAGS: alkali halide, alkali halide crystal, color center, electron paramagnetic resonance, alkali halide colon center, F center, super fine cleavage

ABSTRACT: There is a generally accepted view that an F_2-center consists of two adjacent halogen vacancies with two captured electrons. If true, this should result in the absence of electron paramagnetic resonance. In an effort to verify this view, tests were performed with KCl crystals pre-exposed to light at 270-300C to develop F_2-centers. Spectrometric observations at a frequency modulation of 425 kcps with the use of a N_{10}^2 resonator revealed no resonance in the crystals, thus corroborating the above concept, while control KCl samples containing F-centers gave a strong positive response. Examination of NaCl crystals after thermal treatment, which is known to cause coagulation and produce colloidal alkali metals, revealed an electron paramagnetic resonance

Card 1/2

SHATALOV, A.M.

VASIL'YEV, I.G.; ZIMNITSKAYA, L.P.; SKLYARCHIK, Ye.L.; SMIRNOV, K.M.; FILIPPOV, B.G.; KHITUN, S.A.; SHATALOV, A.M.

Daily rhythm of the ability to work in man [with summary in English]. Fiziol.zhur. 43 no.9:817-824 S '57. (MIRA 10:11)

1. Krasnoznamennyy voyennyy institut fizicheskoy kul'tury i sporta im. V.I.Lenina, Leningrad.
(PHYSICAL EFFICIENCY, daily rhythm (Rus))
(PERIODICITY, daily rhythm of phys. efficiency (Rus))

L 38280-66 EWP(m)/EWT(1) GD

ACC NR: AT6022667 SOURCE CODE: UR/0000/66/000/000/0218/0222

AUTHOR: Shatilov, A. P.

ORG: none

TITLE: Mushroom-shaped pressure transducer for shock tubes

SOURCE: AN SSSR. Energeticheskiy institut. Issledovaniya po fizicheskoy gazodinamike (Studies of physical gas dynamics). Moscow, Izd-vo Nauka, 1966, 218-222

TOPIC TAGS: shock tube, shock wave, pressure measurement, pressure gage, shock wave velocity

ABSTRACT: A mushroom-shaped pressure transducer with a barium titanate sensing element, developed and constructed by the Laboratory of High-Temperature Gasdynamics and Thermodynamics of the Power Engineering Institute im. G. M. Krzhizhanovskiy for measurement of rapid transient pressures in shock-tube investigations is described in detail. It is mounted in the middle section of the inspection chamber of an interferometer thus making it possible to register the variation of density and pressure simultaneously. The smooth suspension, which is the main feature of this transducer, and its good acoustic insulation (cork filling) almost completely eliminate the effects of external factors on the sensing element. A general view of the transducer is presented. The voltage produced by the transducer is detected by a cathode follower. This is known as a "floating-grid-cascade" circuit. The calibration

Card 1/2

L 38280-66

ACC NR: AT6022667

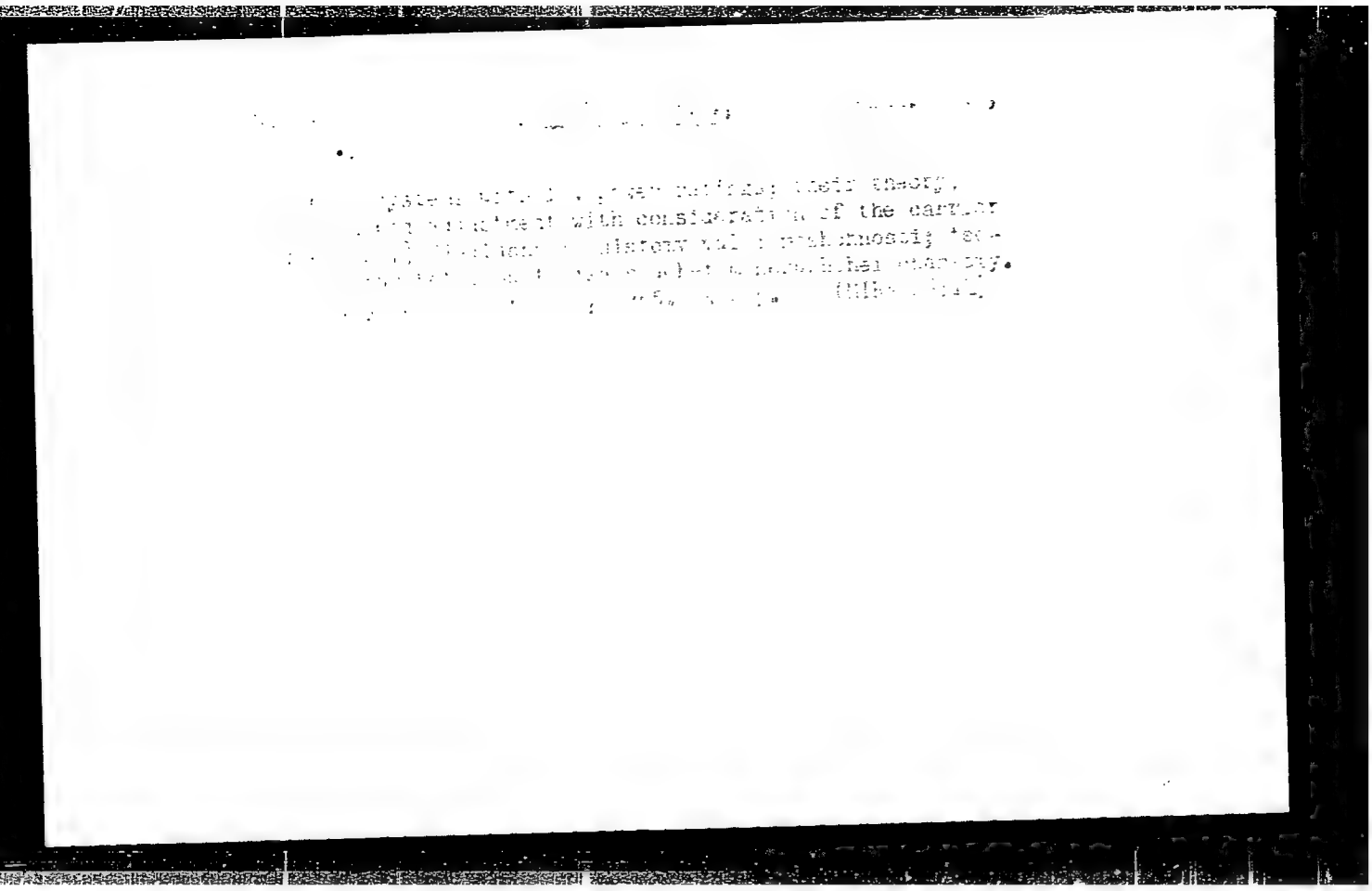
consists in static, dynamic, and joint calibration with the interferometer. An interferogram of a normal shock-wave reflection from the end plate of a shock tube with simultaneous recording of gas pressure behind the shock-wave front is presented. The experiments conducted with this transducer show that 1) the error in pressure measurements is 10 to 15% of the measured value of the pressure; 2) it truly reflects the outcome of the processes taking place near the shock-tube wall and can be used for reciprocal control of two methods (measurement of $P(t)$ and $\rho(t)$) in a given section of the shock tube; 3) the errors in measurement of the absolute pressure value are explained by the reflection of elastic waves from the shaped end of the zinc rod and by the imperfection of the recording apparatus; 4) the determination of shock-wave velocity by means of two transducers located at a certain distance from each other can be carreid out with 1.0 to 1.5% accuracy. Orig. art. has: 3 figures. [AB]

SUB CODE: 20/ SUBM DATE: 00Feb66/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS: 5043

Card 2/2 JS

SHATALOV, A.S.

Correction of errors of functional voltage dividers. Trudy Sem.po toch. mash. no.5:54-74 '52. (MLRA 6:6)
(Electric resistors)



PHASE I BOOK EXPLOITATION SOV/42[illegible]

Avtomaticheskoye upravleniye i vychislitel'naya tekhnika, vyp. 3 (Automatic Control and Computer Techniques, No. 3) Moscow, Mashgiz, 1960. 437 p. Errata slip inserted. 7,000 copies printed.

Ed. of Publishing House: G.P. Polyakov; Tech. Ed.: T.F. Sokolova; Managing Ed. for Literature on Machine Building and Instrument Making (Mashgiz): N.V. Pokrovskiy, Engineer; Editorial Board: V.V. Solodovnikov, Doctor of Technical Sciences, Professor (Chairman), N.N. Bogolyubov, Academician, A.Yu. Ishlinskiy, Academician, Ukrainian SSR, V.V. Kazakevich, Doctor of Technical Sciences, Professor (Deputy Chairman), A.A. Lyapunov, Doctor of Physics and Mathematics, Professor, B.N. Petrov, Corresponding Member, Academy of Sciences USSR, Ye.P. Popov, Doctor of Technical Sciences, Professor, [illegible] Pospelov, Doctor of Techical Sciences, Professor, B.A. Ryabov, Doctor of Technical Sciences, Professor, B.V. Anisimov, Candidate of Technical Sciences, Docent, V.V. Petrov, Doctor of Technical Sciences, Docent, V.N. Plotnikov, Candidate of Technical Sciences, Docent (Scientific Secretary), V.N. Ushakov, Doctor of Technical Sciences.

PURPOSE: This book is intended for scientific workers, engineers, and aspirants working in the field of automatic control.

COVERAGE: The book is the third collection of reports read at the seminar on automatic control and computer engineering of the NTO priborostroyeniya (Scientific and Technical Society for Instrument Making), the MVTU im. Baumana (Moscow Higher Technical School imeni Bauman), and the MAI im. Ordzhonikidze (Moscow "Order of Lenin" Aviation Institute imeni Ordzhonikidze). It contains papers on current topics in automatic control and computer engineering which, according to the authors, are significant for the [illegible] of problems involved in the complex automation of industrial processes by means of control machines and includes discussion of the design of linear and nonlinear automatic control systems. The book covers some questions related to the dynamics of such systems, ways of increasing operational speed, and means of obtaining optimum transient processes. Automatic control systems involving discrete computers, systems with variable parameters, sampled-data [illegible] systems, the dynamic accuracy of these systems during random actions, and the theory of sampled-data systems are discussed. No personalities are mentioned. References are found at the end of each article.

AVAILABLE: Library of Congress

S/194/61/000/007/014/079
D201/D305

16.8000

AUTHOR: Shatalov, A.S.

TITLE: Engineering methods as applied to the linear theory of variable parameter control systems

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 7, 1961, 43, abstract 7 V309 (V sb. Avtomat. upr. i vychisl. tekhn., no. 3, M., Mashgiz, 1960, 233-301)

TEXT: The theory is given of the method of engineering analysis and of mathematical simulation of non-random and statistical problems of control systems with time varying parameters. The process representation is considered in the light of extending to such systems the Laplace transforms. The problem also is considered of solving the variable parameters equations by the method of balancing partial representations and by simulation. 5 references. [Abstracter's note: Complete translation]

VB

Card 1/1

S/588/61/000/004/004/011
D234/D303

16.8000
AUTHOR: Shatalov, A.S.

TITLE: Structural methods of the linear theory of control systems with variable parameters

SOURCE: Avtomaticheskoye upravleniye i vychislitel'naya tekhnika, no. 4, Moscow 1961, 184 - 257

TEXT: The following subjects are treated: Differential polynomials (i.e. differential operators having the form of polynomials in the operator D with variable coefficients), transformations of these (multiplication, division and complementary polynomials), convolution of a system of differential equations by the method of non-commutative determinants, elementary transformations of structural images, (convolution of a cascade circuit, of an equal-sense and opposite-sense parallel circuit, neutralization of a cascade circuit, rules of transferring the nodes and summators), elimination of intermediate controlled quantities by the structural method; structural transformations of canonical forms (convolution of a sy-

Card 1/2

PHASE I BOOK EXPLOITATION SOV/6010

Shatalov, Aleksandr Stepanovich

Strukturnyye metody v teorii upravleniya i elektroavtomatiki (Structural Methods in the Theory of Control and Electric Automation) Moscow, Gosenergoizdat, 1962. 407 p. Errata slip inserted. 10,000 copies printed.

Ed.: Ye. B. Pasternak; Tech. Ed.: L. M. Fridkin.

PURPOSE: This book is intended for engineers and students at the schools of higher education specializing in the field of automatic control systems. It may also be useful to designers of the electronic equipment and components used in automatic control systems.

COVERAGE: The book deals with practical problems in automatic control and electronic automation theory from the standpoint of structural investigation methods. The effect on stability, accuracy, and other indices of systems of the existing

Card 1/5

SHATALOV, A.S., doktor tekhn. nauk, prof. (Moskva)

Structural analysis of linear electrical networks. Elektrichestv: no.5:41-50 My '63. (MIRA 16:7)

(Electric networks)

BORISENKO, N.I.; BUTKEVICH, G.V.; VORONETSKIY, B.B.; VASIL'YEV, D.V.; DROZDOV, N.G.; DUBINSKIY, L.A.; ZALESSKIY, A.M.; KASATKIN, A.S.; KOSTENKO, M.P.; KUZNETSOV, P.I.; KULEBAKIN, V.S.; MAMIKONYANTS, L.G.; MEL'NIKOV, N.A.; NEYMAN, L.P.; PETROV, I.I.; RABINOVICH, S.I.; SAMOKHVALOV, V.A.; SOLODOVNIKOV, V.V.; STEKLOV, V.Yu.; SYROMYATNIKOV, I.A.; FEDOSEYEV, A.M.; CHILIKIN, M.G.; SHATALOV, A.S.; ZHEKULIN, L.A.

Petr Ivanovich Veevodin, 189[illegible] ; on his 80th birthday. Elektrichestvo no.9.92 S '64. (MIRA 17:10)

SHATALOV, A.S., doktor tekhn. nauk, prof. (Moskva)

Modified representation of processes in linear switching cirucits with instantaneous contact and complex lock. Elektrichestvo no.7:44-48 Jl '65. (MIRA 18:7)

L 42103-66

ACC NR: AP6011542 (A,N) SOURCE CODE: UR/0105/66/000/004/0011/0015

AUTHOR: Shatalov, A. S. (Doctor of technical sciences, Professor) (Moscow)

ORG: none

TITLE: Frequency methods of calculating noise at the output of linear electric circuits and control systems

SOURCE: Elektrichestvo, no. 4, 1966, 11-15

TOPIC TAGS: signal noise separation, noise calculation, white noise

ABSTRACT: The transmission of noise through a linear electric circuit or linear control system is theoretically considered. Instead of determining noise dispersion from the formula: $D_y = \frac{1}{\pi}\int_0^\infty S_y(\omega)\,d\omega = \frac{1}{\pi}\int_0^\infty |\varphi(j\omega)|^2 S_x(\omega)\,d\omega$ (J. K. Newton

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et al., "Theory of Linear Servosystems"), it is suggested that the dispersion be calculated, in terms of a correlation function $K(\tau)$, from this formula: $D = K(\tau)|_{\tau=0} = K(0)$. The spectral density $S(\omega)$ and the correlation function $K(\tau)$ are interconnected by a two-way Fourier transform, which permits calculating the dispersion, in the map region, on the basis of this boundary relation: $D = K(0) = K[0) = \lim_{\omega \to \infty} j\omega \overline{S}(j\omega)$. This relation is further transformed into: $D = -\frac{1}{2} \lim_{\omega \to \infty} \{\omega \lambda_S^T [S(\omega)]\}$. The complete correlation function is calculated from: $K(\tau) = \frac{1}{2} F^{-1} \{S(\omega) + j\lambda_s^T [S(\omega)]\}$. Assuming that the system is stable and the noise is a stationary random process, the lambda-transform technique is applied, and determination of functions is reduced to finding their coefficients. Output correlation functions with an input unit white noise and with an arbitrary stationary noise are determined. Orig. art. has: 2 figures and 62 formulas.

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Shatalov, Aleksandr Stepanovich

Conversion of signals and their representative functions with generalized linear systems of automatic control (Preobrazovaniya signalov i izobrazhayushchikh ikh funktsiy obobshchennymi lineynymi sistemami avtomaticheskogo upravleniya) Moscow, Izd-vo "Energiya", 1965. 343 p. illus., biblio. Errata slip inserted. 5,600 copies printed.

TOPIC TAGS: signal processing, signal analysis, linear automatic control, linear control system

PURPOSE AND COVERAGE: This book is intended for engineers, aspirants, and students in advanced courses in schools of higher technical education specializing in the field of automatic control. The book discusses the operational analysis of generalized linear systems, i.e., linear systems with variable and constant parameters, amplitude modulation, pulse linear systems, and linear systems with quadratic (exact, energetic, or static) signal evaluations. Compact formulas and relations are obtained, which allow the engineer to investigate generalized linear systems with very complicated conditions of signal conversion. The λ-transformation method suggested by the authors

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it possible to bind known operations over the representations into a single system and to obtain a series of new, useful, and practical relations. A.A.Krasovskiy helped prepare the manuscript and P.I. Kuznetsov edited the book.. References to each chapter are listed separately in the bibliography. There are 57 references; 49 Soviet, and 8 non-Soviet.

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